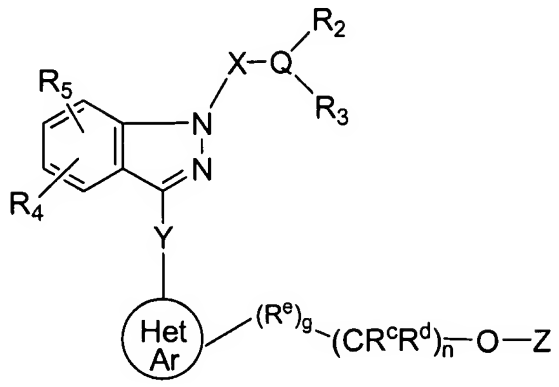
In the Claims

1(Original) A compound of the structural formula I:



Formula I

or a pharmaceutically acceptable salt, *in vivo* hydrolysable ester, enantiomer, diastereomer or mixture thereof: wherein,

R represents hydrogen, or C_{1-6} alkyl;

R^c and R^d independently represents hydrogen or halo;

R^e represents N or O;

X represents $-(CHR_7)_p-$, $-(CHR_7)_pCO-$;

Y represents $-CO(CH_2)_n-$, CH_2, or -CH(OR)-;

Q represents N, or O, wherein R_2 is absent when Q is O;

R_w represents H, C_{1-6} alkyl, $-C(O)C_{1-6}$ alkyl, $-C(O)OC_{1-6}$ alkyl, $-SO_2N(R)_2$, $-SO_2C_{1-6}$ alkyl, $-SO_2C_{6-10}$ aryl, NO_2, CN or $-C(O)N(R)_2$;

R_2 represents hydrogen, C_{1-10} alkyl, OH, C_{2-6} alkenyl, C_{1-6} alkylSR, $-(CH_2)_nO(CH_2)_mOR$, $-(CH_2)_nC_{1-6}$ alkoxy, $-(CH_2)_nC_{3-8}$ cycloalkyl, $-(CH_2)_nC_{3-10}$ heterocyclyl, $-N(R)_2$, -COOR, or $-(CH_2)_nC_{6-10}$ aryl, said alkyl, heterocyclyl, or aryl optionally substituted with 1-3 groups selected from R^a;

R_3 represents hydrogen, C_{1-10} alkyl, $-(CH_2)_nC_{3-8}$ cycloalkyl, $-(CH_2)_nC_{3-10}$ heterocyclyl, $-(CH_2)_nCOOR$, $-(CH_2)_nC_{6-10}$ aryl, $-(CH_2)_nNHR_8$, $-(CH_2)_nN(R)_2$, $-(CH_2)_nN(R_8)_2$, $-(CH_2)_nNHCOOR$, $-(CH_2)_nN(R_8)CO_2R$, $-(CH_2)_nN(R_8)COR$, $-(CH_2)_nNHCOR$, $-(CH_2)_nCONH(R_8)$, aryl, $-(CH_2)_nC_{1-6}$ alkoxy, CF_3, $-(CH_2)_nSO_2R$, $-(CH_2)_nSO_2N(R)_2$, $-(CH_2)_nCON(R)_2$, $-(CH_2)_nCONHC(R)_3$, $-(CH_2)_nCONHC(R)_2CO_2R$, $-(CH_2)_nCOR_8$, nitro, cyano or halogen, said alkyl, alkoxy, heterocyclyl, or aryl optionally substituted with 1-3 groups of R^a;

or, R_2 and R_3 taken together with the intervening Q form a 3-10 membered carbocyclic or heterocyclic carbon ring optionally interrupted by 1-2 atoms of O, S, C(O) or NR, and optionally having 1-4 double bonds, and optionally substituted by 1-3 groups selected from R^a;

R_4 and R_5 independently represent hydrogen, C_{1-6} alkoxy, OH, C_{1-6} alkyl, COOR, SO_3H, $-O(CH_2)_nN(R)_2$, $-O(CH_2)_nCO_2R$, $-OPO(OH)_2$, CF_3, OCF_3, $-N(R)_2$, nitro, cyano, C_{1-6} alkylamino, or halogen;

represents C_{6-10} aryl or C_{3-10} heterocyclyl, said aryl or heterocyclyl optionally substituted with 1-3 groups selected from R^a;

Z represents $(CH_2)_nPO(OR)(OR^*)$;

R* represents hydrogen, or C_{1-6} alkyl;

R_7 represents hydrogen, C_{1-6} alkyl, $-(CH_2)_nCOOR$ or $-(CH_2)_nN(R)_2$,

R_8 represents $-(CH_2)_nC_{3-8}$ cycloalkyl, $-(CH_2)_n$ 3-10 heterocyclyl, C_{1-6} alkoxy or $-(CH_2)_nC_{5-10}$ heteroaryl, $-(CH_2)_nC_{6-10}$ aryl said heterocyclyl, aryl or heteroaryl optionally substituted with 1-3 groups selected from R^a;

R^a represents F, Cl, Br, I, CF_3, $N(R)_2$, NO_2, CN, $-COR_8$, $-CONHR_8$, $-CON(R_8)_2$, $-O(CH_2)_nCOOR$, $-NH(CH_2)_nOR$, -COOR, $-OCF_3$, -NHCOR, $-SO_2R$, $-SO_2NR_2$, -SR, (C_1-C_6 alkyl)O-, $-(CH_2)_nO(CH_2)_mOR$, $-(CH_2)_nC_{1-6}$ alkoxy, (aryl)O-, $-(CH_2)_nOH$, (C_1-C_6 alkyl)$S(O)_m$-, H_2N-C(NH)-, (C_1-C_6 alkyl)C(O)-, (C_1-C_6 alkyl)OC(O)NH-, $-(C_1$-C_6 alkyl)$NR_w(CH_2)_nC_{3-10}$ heterocyclyl-R_w, $-(C_1$-C_6 alkyl)$O(CH_2)_nC_{3-10}$

heterocyclyl-R_w, -(C_1-C_6 alkyl)S$(CH_2)_nC_{3-10}$ heterocyclyl-R_w, -(C_1-C_6 alkyl)-C_{3-10} heterocyclyl-R_w, -$(CH_2)_n$-Z^1-C(=Z^2)N$(R)_2$, -(C_{2-6} alkenyl)N$R_w(CH_2)_nC_{3-10}$ heterocyclyl-R_w, -(C_{2-6} alkenyl)O$(CH_2)_nC_{3-10}$ heterocyclyl-R_w, -(C_{2-6} alkenyl)S$(CH_2)_nC_{3-10}$ heterocyclyl-R_w, -(C_{2-6} alkenyl)-C_{3-10} heterocyclyl-R_w, -(C_{2-6} alkenyl)-Z^1-C(=Z^2)N$(R)_2$, -$(CH_2)_nSO_2R$, -$(CH_2)_nSO_3H$, -$(CH_2)_nPO(OR)_2$, C_{3-10}cycloalkyl, C_{6-10} aryl, C_{3-10} heterocyclyl, C_{2-6} alkenyl, and C_1-C_{10} alkyl, said alkyl, alkenyl, alkoxy, heterocyclyl and aryl optionally substituted with 1-3 groups selected from C_1-C_6 alkyl, CN, NO_2, OH, CON$(R)_2$ and COOR;

Z^1 and Z^2 independently represents NR_w, O, CH_2, or S;

g is 0-1;

m is 0-3;

n is 0-3; and

p is 0-3.

2(Original). The compound according claim 1 wherein p is 1-3, Y is -CO$(CH_2)_n$, Q is N, X is –$(CHR_7)_p$-, or –$(CHR_7)_p$CO-,.

3(Original). The compound according claim 1 wherein Q is O and R_2 is absent.

4(Original). The compound according to claim 2 wherein Z is PO(OR)(OR*), R_2 is C_{1-10} alkyl or C_{1-6} alkylOH, Y is -CO$(CH_2)_n$ and R_3 is $(CH_2)_nC_{3-10}$ heterocyclyl, said heterocyclyl and alkyl optionally substituted with 1 to 3 groups of R^a.

5(Original). The compound according to claim 4 wherein 

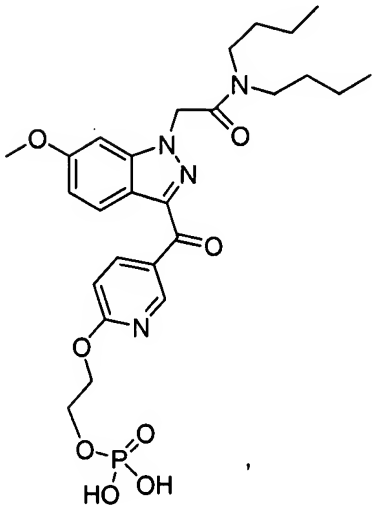
is a 6 membered heteroaryl or phenyl optionally substituted with 1-3 groups selected from R^a.

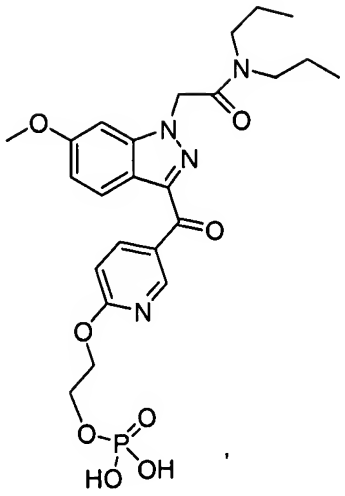
6(Currently Amended). A compound according to claim 1 ~~5~~ wherein 

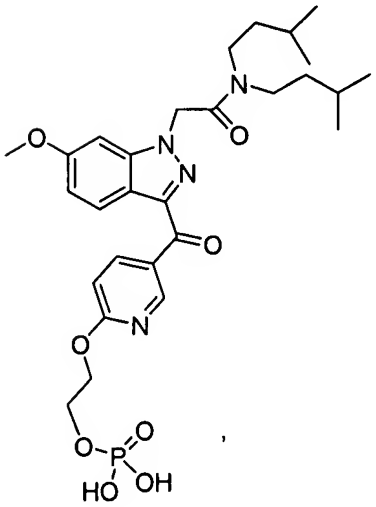
is pyridyl optionally substituted with 1-3 groups selected from R^a.

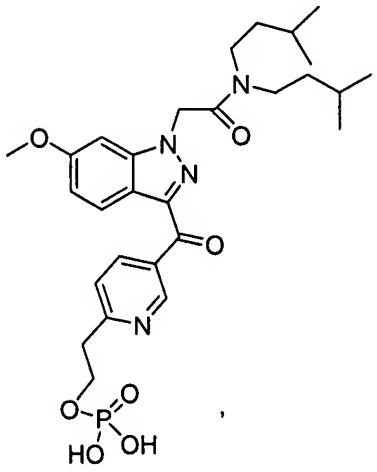
7(Original). A compound according to claim 1 which is in the form of a sodium or disodium salt.

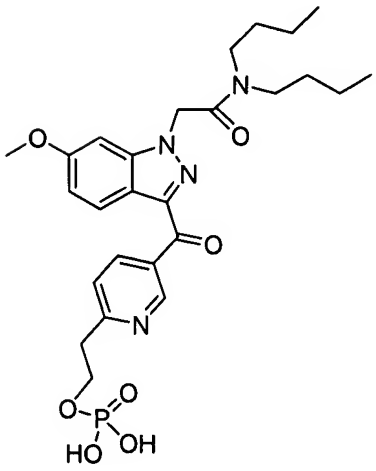
8(Original). A compound which is:











or a pharmaceutically acceptable salt, in vivo hydrolysable ester, enantiomer, diastereomer or mixture thereof.

9(Currently Amended). A method ~~Use of a compound of formula I in claim 1 for the manufacture of a medicament~~ for the treatment of ocular hypertension or glaucoma comprising administering a compound of formula I accordingly to claim 1.

10(Currently Amended). A method ~~Use of a compound of formula I in claim 1 for the manufacture of a medicament~~ for the treatment of macular edema, macular degeneration, increasing retinal and optic nerve head blood velocity, increasing retinal and optic nerve oxygen tension, and/or a neuroprotective effect comprising administering a compound of formula I accordingly to claim 1.

11(Currently Amended). A method ~~Use of a compound of formula I in claim 1 for the manufacture of a medicament~~ for preventing repolarization or hyperpolarization of a mammalian cell containing potassium channel or for treating Alzheimer's Disease, depression, cognitive disorders, and/or arrhythmia disorders comprising administering a compound of formula I accordingly to claim 1.

12(Currently Amended). A method ~~Use of a compound of formula I in claim 1 for the manufacture of a medicament~~ for treating diabetes comprising administering a compound of formula I accordingly to claim 1.

13(Original). A composition comprising a compound of formula I of claim 1 and a pharmaceutically acceptable carrier.

14(Original). The composition according to Claim 13 wherein the compound of formula I is applied as a topical formulation, said topical formulation administered as a solution or suspension and optionally containing xanthan gum or gellan gum.

15(Currently Amended). A composition according to claim 14 wherein one or more of an active ingredient belonging to the group consisting of: β-adrenergic blocking agent, parasympatho-mimetic agent, sympathomimetic agent,

carbonic anhydrase inhibitor, EP4 agonist, a prostaglandin ~~or derivative thereof~~, hypotensive lipid, neuroprotectant, and/or 5-HT2 receptor agonist is optionally added.

16(Original). A composition according to claim 15 wherein the β-adrenergic blocking agent is timolol, betaxolol, levobetaxolol, carteolol, or levobunolol; the parasympathomimetic agent is pilocarpine; the sympathomimetic agent is epinephrine, brimonidine, iopidine, clonidine, or para-aminoclonidine, the carbonic anhydrase inhibitor is dorzolamide, acetazolamide, metazolamide or brinzolamide; the prostaglandin is latanoprost, travaprost, unoprostone, rescula, or S1033, the hypotensive lipid is lumigan, the neuroprotectant is eliprodil, R-eliprodil or memantine; and the 5-HT2 receptor agonist is 1-(2-aminopropyl)-3-methyl-1H-imdazol-6-ol fumarate or 2-(3-chloro-6-methoxy-indazol-1-yl)-1-methyl-ethylamine.